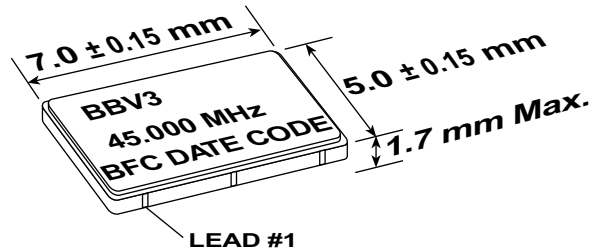




3.3V 5x7 Voltage Controlled Crystal Oscillators

Applications:

- Phase Locked Loops
- Clocking
- Signal Modulation/Demodulation
- Reference Signal Tracking



Features:

- Ceramic Construction, Metal Lid; Seam-sealed, Resistance Welded Hermetic Package
- 1.0 to 66 MHz Frequency Range
- 0.3V to 3.0V Control Voltage
- ±50ppm Stability
- -40°C to 85°C Operating Temperature Option
- Tape and Reel Available
- Ground Shielded Top and Bottom 6-Pin 5x7mm LCC Package

Performance Specifications

Model	BBV3 Series
Frequency Range	1MHz to 66MHz
Frequency Stability(ppm Max) Over Temperature, Voltage, Load, Shock, Vibration, Aging	± 50ppm
Frequency Control Function	See Note 1
Minimum Tuning Limit	± 50ppm
Temperature Performance	
Operating Temperature Range	-40°C to 85°C
Storage Temperature	-55°C to 125 °C
Electrical Specifications	
Supply Voltage(DC)	3.3V ± 10 %
Supply Current	<30 mA Max.
Symmetry	40/60
Rise and Fall Time	10 nS Max.(std.), 6nS
Load	10TTL w/15pf capacitance(std.)
Linearity	< 10%
Modulation Bandwidth(3dB)	>20KHz
Nominal Control Voltage(V)	1.65
Control Voltage Range(V)	0.3 to 3.0
Transfer Function	Positive
Input Impedance	>50KΩ @ 10 KHz
Frequency Adjustment	Manual Adjusted (ppm) ±5 min.
Aging @ 25C	+/-1ppm Max/ Yr(std.)

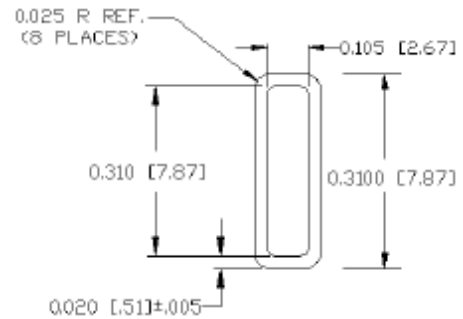
Typical SSB Phase Noise(dBc/Hz) Performance offset from Carrier

10Hz	-65
100Hz	-95
1KHz	-115
10KHz	-130
100KHz	-140

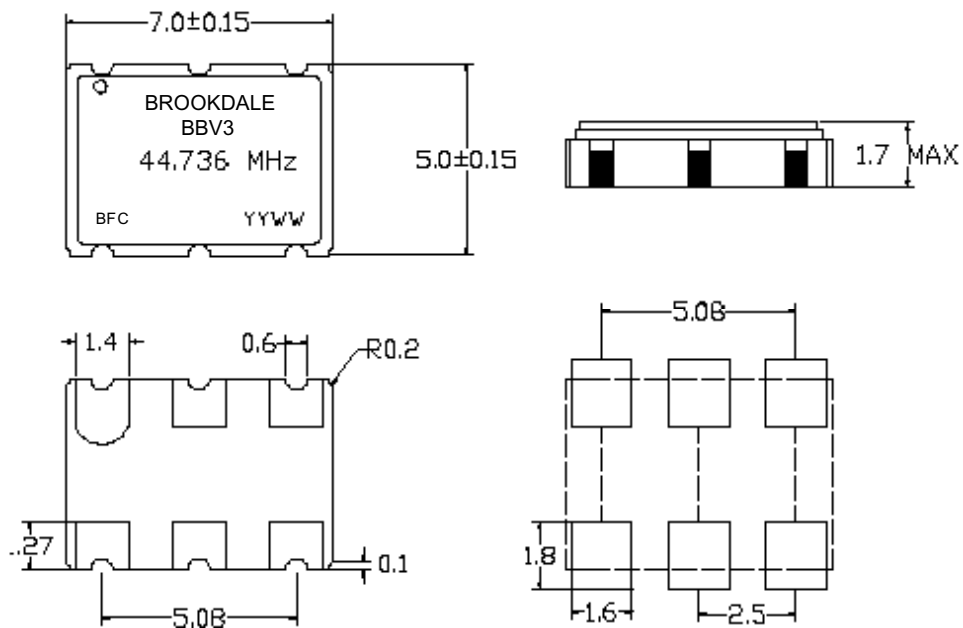
Note 1 (For Custom Deviation Range, Vc Range, etc. - Consult Factory)

PIN	Function
1	Voltage Control
2	Tri-State
3	Gnd and Ground Plane
4	Output
5	N/C
6	+V _{CC}

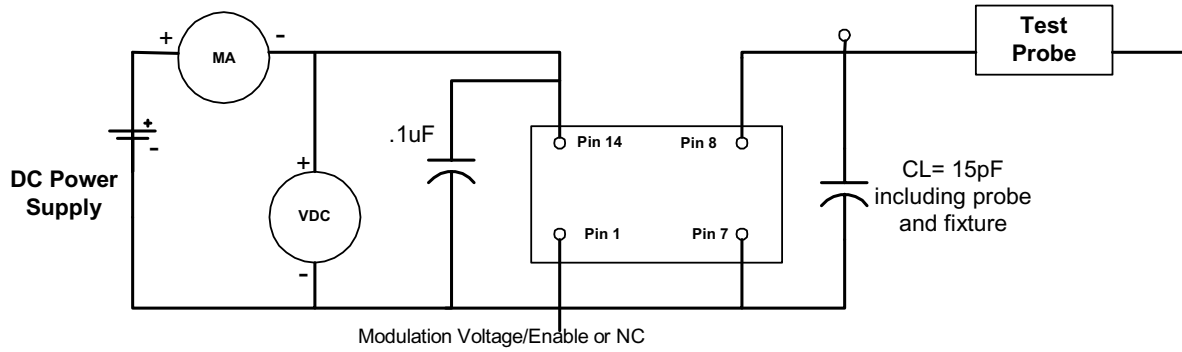
Shipping Tube Cross Section



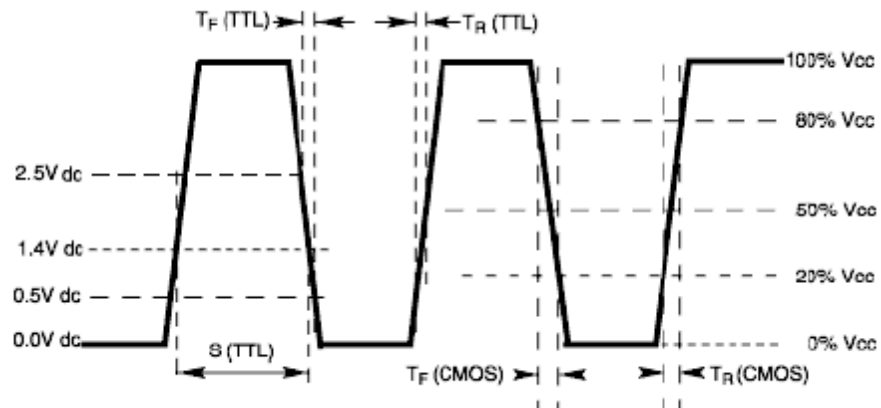
Mechanical Dimensions



Test Circuit Description



Output Waveform

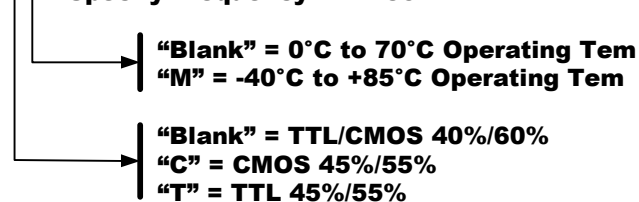


Mechanical and Environmental Specifications

Test	Reference Documents	Test Description
Temperature Cycle	MIL-STD-883, Mtd 1010, Cond. B	-55°C to + 25°C; Air to Air; 100 cycles; 10 min. dwell
Mechanical Shock	MIL-STD-883, Mtd 2002, Cond. B	1500g's
Vibration	MIL-STD-883, Mtd 2007, Cond. B	20-2000 Hz; 0.06 inch; 15 g's; 3 planes
Humidity Steady State	MIL-STD-202, Mtd 103	40°C; 90%-95% R.H.; 56 days
Thermal Shock	MIL-STD-883, Mtd 1011.7, Cond. B	100°C to 0°C; Water-to-Water; 15 cycles
Electrostatic Discharge	MIL-STD-883, Mtd 3015, Class II	2 KV to 4 KV Threshold
Solderability	MIL-STD-883, Mtd 1005.6	Solder dip; Meniscograph Criteria
Hermeticity	MIL-STD-883, Mtd 2022.2	Mass spectro. 2 X 10 ⁻⁸ atmos. CC/sec He
Resistance to Soldering	MIL-STD-883, Mtd 1014.8, Cond. A1	260°C; 10 seconds: 1 inch/sec.
Lead Integrity	MMIL-STD-202, Mtd 210A, Cond. C	Lead tension and bend stress
Marking Permanence	MIL-STD-883, Mtd 2004.5, Cond. A, B1	Resistance to solvents

Part Numbering Guide

BBV3 XX - Specify Frequency "44.736MHz"



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